Non-Defense Site Acceleration Completion

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Proposed Appropriation Language

For Department of Energy expenses, including the purchase, construction, and acquisition of plant and capital equipment and other expenses necessary for non-defense environmental management site acceleration completion activities in carrying out the purposes of the Department of Energy Organization Act (42. U.S.C. 7101 et seq.), including the acquisition or condemnation of any real property or any facility or for plant or facility acquisition, construction, or expansion, $151,850,000 to remain available until expended.

Explanation of Change

None.

Non-Defense Site Acceleration Completion

Funding Profile by Program

(dollars in thousands)

	FY 2003 Comparable Appropriation	FY 2004 Original Appropriation	FY 2004 Adjustments	FY 2004 Comparable Appropriation	FY 2005 Request
Non-Defense Site Acceleration Completion					
2006 Accelerated Completions……..	53,972	48,677	-265	48,412	45,435
2012 Accelerated Completions……..	109,323	119,750	-671	119,079	98,191
2035 Accelerated Completions……..	4,289	4,948	-28	4,920	8,224
Subtotal, Non-Defense Site Acceleration Completion…….	167,584	173,375	-964 [a]	172,411	151,850
Use of Prior Year Balances…….	0	-10,000	0	-10,000	0
Total, Defense Environmental Services	167,584	163,375	-964	162,411	151,850

Public Law Authorizations:
Public Law 95-91, "Department of Energy Organization Act, 1977"
Public Law 95-604, "Uranium Mill Tailing Radiation Control Act of 1979"
Public Law 96-368, "West Valley Demonstration Project Act"
Public Law 103-62, "Government Performance and Results Act of 1993"
Public Law 108-137, "Energy and Water Development Appropriations Act, 2004"

a/ Reflects rescission reduction of $964,000.

Mission

The mission of the Office of Environmental Management is to accelerate risk reduction and cleanup of the environmental legacy of the nation's nuclear weapons program and government-sponsored nuclear energy research.

Benefits

This appropriation provides funding to accelerate risk reduction and environmental cleanup at sites contaminated as a result of nuclear research. As the cleanup of these sites progresses, the risk and hazard to human health and the environment is greatly reduced. In addition, as cleanup is completed and sites are closed, the financial resources needed to maintain site infrastructure will no longer be required. By focusing resources on accelerating risk reduction and cleanup rather than managing risk, the cleanup of these sites will be achieved in a shorter timeframe and at less cost.

The Environmental Management program is responsible for managing and addressing the environmental legacy resulting from the production of nuclear weapons and nuclear energy research. Environmental Management's responsibilities include facilities and areas at 114 geographic sites. These sites are located in 31 states and one territory and occupy an area equal to that of Rhode Island and Delaware combined – or about two million acres.

The Non-Defense Site Acceleration Completion appropriation provides for the accelerated cleanup and risk reduction of sites used for civilian energy research. This appropriation includes three programs: 2006 Accelerated Completions; 2012 Accelerated Completions; and 2035 Accelerated Completions.

The FY 2005 request for the Non-Defense Site Acceleration Completion appropriation is $151,850,000, a decrease of $20,561,000, from the comparable FY 2004 Comparable appropriation of $172,411,000.

2006 Accelerated Completions

Funding Schedule by Activity

(dollars in thousands)

	FY 2003	FY 2004	FY 2005	$ Change	% Change
CH-ANLE-0030/Soil and Water Remediation-Argonne National Laboratory-East……..	2,863	1,521	404	-1,117	-73.4%
CH-ANLW-0030/Soil and Water Remediation-Argonne National Laboratory-West……	386	0	0	0	0.0%
CH-BRNL-0030/Soil and Water Remediation-Brookhaven National Laboratory……..	25,976	30,226	29,017	-1,209	-4.0%
CH-BRNL-0040/Nuclear Facility Decontamination and Decommissioning-Brookhaven Graphite Research Reactor…….	8,748	7,180	8,453	1,273	17.7%
CH-PPPL-0030/Soil and Water Remediation-Princeton Site A/B……..	0	124	0	-124	-100.0%
OH-WV-0012/Spent Nuclear Fuel Stabilization and Disposition-West Valley…...	3,571	0	0	0	0.0%
VL-ITL-0030/Soil and Water Remediation-Inhalation Toxicology Laboratory……..	1,065	476	491	15	3.2%
VL-GA-0012/Spent Nuclear Fuel Stabilization and Disposition-General Atomics……	1,575	0	0	0	0.0%
VL-LBNL-0030/Soil and Water Remediation-Lawrence Berkeley National Laboratory……..	3,134	3,228	4,070	842	26.1%
VL-LEHR-0040/Nuclear Facility Decontamination and Decommissioning-Laboratory for Energy-Related Health Research……..	4,049	3,273	500	-2,773	-84.7%
VL-SLAC-0030/Soil and Water Remediation-Stanford Linear Accelerator Center……..	2,605	2,384	2,500	116	4.9%
Total, 2006 Accelerated Completions……	53,972	48,412	45,435	-2,977	-6.1%

Description

The Non-Defense Site Acceleration Completion appropriation, 2006 Accelerated Completions program provides funding for completing cleanup and closing facilities contaminated as a result of nuclear energy research and development. This program includes all geographic sites with a planned closure date of 2006 or earlier (e.g., Stanford Linear Accelerator Center). In addition, this program provides funding for Environmental Management sites where overall site cleanup will not be completed by 2006 but certain non-defense cleanup projects within a site (e.g., soil contamination remediated, all waste shipped off-site) will be completed by 2006.

Benefits

This program provides funding to accelerate risk reduction and environmental cleanup at non-defense sites where cleanup will be completed by 2006 or certain cleanup projects within a site will be completed by 2006. As the cleanup of these sites and projects progress, the risk and hazard to human health and the environment is greatly reduced. In addition, as cleanup is completed and sites are closed, the financial resources needed to maintain site infrastructure will no longer be required. By focusing resources on accelerating risk reduction and cleanup rather than managing risk, the cleanup of these sites will be achieved in a shorter timeframe and at less cost.

Funding by Site

(dollars in thousands)

	FY 2003	FY 2004	FY 2005	$ Change	% Change
Chicago					
Argonne National Laboratory – East	2,863	1,521	404	-1,117	-73.4%
Argonne National Laboratory – West	386	0	0	0	0.0%
Brookhaven National Laboratory	34,724	37,406	37,470	64	0.2%
Princeton Plasma Physics Laboratory	0	124	0	-124	-100.0%
Total, Chicago Operations Office	37,973	39,051	37,874	-1,177	-3.0%
NNSA Service Center					
Inhalation Toxicology Laboratory	1,065	476	491	15	3.2%
General Atomics	1,575	0	0	0	0.0%
Lawrence Berkeley National Laboratory	3,134	3,228	4,070	842	26.1%
Laboratory for Energy-Related Health Research	4,049	3,273	500	-2,773	-84.7%
Stanford Linear Accelerator Center	2,605	2,384	2,500	116	4.9%
Total, NNSA Service Center	12,428	9,361	7,561	-1,800	-19.2%
Ohio					
West Valley Demonstration Project	3,571	0	0	0	0.0%
Total, 2006 Accelerated Completions	53,972	48,412	45,435	-2,977	-6.1%

Detailed Justification

(dollars in thousands)

FY 2003	FY 2004	FY 2005
CH-ANLE-0030 / Soil and Water Remediation-Argonne National Laboratory -East (life-cycle estimate $28,341K)…….	**2,863**	**1,521**	**404**

Contamination of groundwater, sediment, and soils has occurred at Argonne National Laboratory-East as a result of past laboratory operations and spills. Contaminants of concern include volatile organic compounds, petroleum hydrocarbons, metals, polychlorinated biphenyl compounds, and a variety of radioisotopes. This PBS involves investigation and remedial activities at the Argonne National Laboratory-East to reduce risk to human health and the environment at the release sites and thus comply with corrective action requirements of the Resource Conservation and Recovery Act Part B permit issued by the Illinois Environmental Protection Agency. The remaining Resource Conservation Recovery Act solid waste management units/release sites will be completed in FY 2004. Most field work was completed in FY 2003 with requests to the Illinois Environmental Protection Agency for all appropriate "No Further Actions". Regulator acceptance and, therefore, EM completion is expected in early FY 2004. However, residual contamination will remain at several areas of the Argonne National Laboratory-East site, which will require continued monitoring and/or remediation system operation, under institutional control (Land Use Control Memorandum of Agreement).

The EM end-state of this project will be reached when the remaining Resource Conservation and Recovery Act solid waste management units/release site remedies are installed; the Illinois Environmental Protection Agency has formally issued all “No Further Actions”; the remediation systems are operational; and maintenance activities have been integrated into the site monitoring and surveillance program conducted by the site landlord (Office of Science) at Argonne National Laboratory-East. Continuing operation and maintenance activities for the remediation systems are expected to be transferred to the landlord after FY 2004.

In FY 2005, the following activities are planned to support the accelerated cleanup of Argonne National Laboratory.

- Conduct continuing long-term response actions, such as operation and maintenance of remedial system, hydraulic containment, and groundwater monitoring.

Metrics	FY 2003	FY 2004	FY 2005	Cumulative Complete FY 2005	Life-cycle Quantity	FY 2005 % Complete
Remediation Complete (Number of Release Sites)……	4	0	0	443	443	100%

Key Accomplishments (FY 2003)/Planned Milestones (FY 2004/ FY 2005)

- Received 11 No Further Actions (including the 320 Area Shooting Range and Building 34-Liquid Mixed Waste Treatment) from the Illinois Environmental Protection Agency for a total of 52 No Further Actions for the Remedial Action Program at Argonne National Laboratory East (FY 2003).

(dollars in thousands)

FY 2003	FY 2004	FY 2005

- For the 317 Area North and Deep Vaults (Solid Waste Management Units 743 and 747), the phytoremediation plantation was deployed over the area formerly occupied by the 317 Area Concrete Storage Pad (FY 2003).
- Submitted the final construction report for the 570 Area Unlined Holding Basin to DOE and the Illinois Environmental Protection Agency (FY 2003).
- Completed lime sludge recycling (FY 2003).
- Complete all remedial activities at the Argonne National Laboratory-East (September 2004).
- Continue operation and maintenance activities (September 2005).

CH-ANLW-0030 / Soil and Water Remediation-Argonne National Laboratory-West (life-cycle estimate $7,939K)…… 386 0 0

Past operations of the Experimental Breeder Reactor II and associated facilities at Argonne National Laboratory-West have resulted in contaminated surface soils and sediments. Primary contaminants of concern include cesium-137 and heavy metals. This PBS involves remediation activities at the Argonne National Laboratory-West Waste Area Group 9 to assess and reduce risk, as well as to comply with the Federal Facilities Agreement/Consent Order. All planned soil remediation activities were completed (geographic site completion) in FY 2001. Continuing operation and maintenance activities (related to the phytoremediation activities of vegetation planting and harvesting), monitoring, and verification sampling were completed in FY 2003.

The end-state of this project, completion of phytoremediation operation and maintenance activities (i.e., vegetation harvesting), and verification sampling was accomplished in FY 2003. The tasks of monitoring and maintaining restricted areas, and enforcing institutional controls are expected to be transferred to the landlord (Office of Nuclear Energy) during FY 2004.

- No planned activities and funds are requested for FY 2005.

Metrics	FY 2003	FY 2004	FY 2005	Cumulative Complete FY 2005	Life-cycle Quantity	FY 2005 % Complete
Remediation Complete (Number of Release Sites)……..	0	0	0	37	37	100%

Key Accomplishments (FY 2003)/Planned Milestones (FY 2004/FY 2005)

- Conducted verification sampling of soil at release sites where phytoremediation had been implemented to ensure all remediation goals had been met (FY 2003).
- Disposed of all harvested plant matter (FY 2003).

(dollars in thousands)

FY 2003	FY 2004	FY 2005

CH-BRNL-0030 / Soil and Water Remediation-Brookhaven National Laboratory (life-cycle estimate $195,943K)…….. 25,976 30,226 29,017

Historical practices and discharges, as well as past spills, have resulted in the contamination of groundwater, sediments, and soils at Brookhaven National Laboratory. As a result, off-site and onsite groundwater has become contaminated with volatile organic compounds, in addition to onsite radionuclides such as tritium and strontium-90. Historical discharges from Brookhaven National Laboratory's Sewage Treatment Plant have resulted in elevated levels of metals, primarily mercury, and radionuclides (e.g. cesium-137), in the Peconic River sediments both on and off-site. Some soils at Brookhaven National Laboratory are contaminated with radionuclides (primarily cesium-137 and stronium-90) and chemicals (primarily mercury) due to historical practices and spills. This PBS addresses the accelerated cleanup of these contaminated areas based on known or potential risks to human health and the environment at the Brookhaven National Laboratory. These areas are being remediated under a Comprehensive Environmental Response, Compensation, and Liability Act Interagency Agreement between DOE, the United States Environmental Protection Agency, and the New York State Department of Environmental Conservation. Strategic Initiative 1 in the Brookhaven National Laboratory Performance Management Plan accelerates the completion of the groundwater and soils cleanup projects by one year from FY 2006 to FY 2005. Strategic Initiative 2 accelerates Peconic River Remedy Selection and Cleanup with completion in FY 2005. Strategic Initiative 5 is DOE's commitment to plan and implement an effective monitoring and remediation system operation program at Brookhaven National Laboratory. These initiatives accelerate Brookhaven National Laboratory soil and groundwater cleanup projects and also provide for a risk-based remedy selection process for the Peconic River cleanup. In combination, these initiatives will accelerate the completion of the Brookhaven National Laboratory environmental cleanup program by over one year (from FY 2006 to FY 2005) and will support completion of all EM cleanup at Brookhaven (including the Brookhaven Graphite Research Reactor and High Flux Beam Reactor) by the end of FY 2008.

The projected end-state of this project is that 17 groundwater treatment systems will be built and operating and that all required non-reactor facility decontamination and decommissioning, soil cleanup and Peconic River remediation will be complete by the end of FY 2005. Continuing activities such as groundwater monitoring and groundwater treatment system operations and maintenance would be underway and will be transferred to the landlord (Office of Science) in FY 2006. Groundwater cleanup is Brookhaven National Laboratory's highest priority because it is located above Long Island’s sole source aquifer, which provides the only source of drinking water for residents. Cleanup consists of the installation of groundwater treatment systems both on and off site, continued monitoring, source term removal, and natural attenuation. Identified contaminated Peconic River sediments and soils will be excavated and disposed. The operable units are in various stages of completion and many cleanup activities have been completed. Three landfills have been capped and numerous contaminated cesspools, storage tanks and contaminated soils have been removed with off-site disposal. Ten groundwater treatment systems have been built and are operating.

FY 2004 activities include the construction of several off-site groundwater treatment systems, the initiation of soil cleanup at the old Hazardous Waste Management Facility, and the disposition of remaining chemical holes soils and legacy wastes in support of Strategic Initiative 1, the acceleration of

(dollars in thousands)

groundwater and soil cleanup at Brookhaven National Laboratory. The initiation of Peconic River cleanup in FY 2004 supports Strategic Initiative 2 to complete cleanup by FY 2005. Continuing site-wide monitoring and reporting activities in FY 2004 and beyond support Strategic Initiative 5, DOE's commitment to plan and implement an effective monitoring and remediation system operation program at Brookhaven National Laboratory.

In FY 2005, the following activities are planned to support the accelerated cleanup of Brookhaven National Laboratory.

- In support of Strategic Initiative 1, Accelerate Groundwater and Soils Cleanup: Complete all remaining scope, including achieving operational status for all groundwater treatment systems; complete soils remediation; complete disposal of remaining EM legacy waste.
- In support of Strategic Initiative 2, Accelerate Peconic River Remedy Selection and Cleanup: Complete the Peconic River cleanup.
- In support of Strategic Initiative 5, Cost-effective Long Term Stewardship: Continue site wide monitoring, data management and reporting activities.

Metrics	FY 2003	FY 2004	FY 2005	Cumulative Complete FY 2005	Life-cycle Quantity	FY 2005 % Complete
Radioactive Facility Completions (Number of Facilities)……	0	0	3	3	3	100%
Remediation Complete (Number of Release Sites)…….	0	0	8	75	75	100%

Key Accomplishments (FY 2003)/Planned Milestones (FY 2004/ FY 2005)

- Completed design and construction and began operation of the Western South Boundary and Strontium 90 Pilot Study groundwater treatment systems (FY 2003).
- Completed final designs, and started construction of the Long Island Power Authority Airport, North Street, North Street East, and Industrial Park East groundwater treatment systems (FY 2003).
- Strategic Initiative 2, Accelerated Peconic River Remedy Selection and Cleanup, prepared human health risk assessment to determine the risks of contaminants and prepared a feasibility study to evaluate the effectiveness of various cleanup options to support the selection of a final remedy. Submitted draft Record of Decision to regulators (FY 2003).
- Completed cleanup of the Sewage Treatment Plant (FY 2003).

(dollars in thousands)

FY 2003	FY 2004	FY 2005

- Complete construction of the Airport/Long Island Power Authority Groundwater Treatment System (March 2004).
- Complete Operable Unit I remediation (April 2005).

CH-BRNL-0040 / Nuclear Facility Decontamination and Decommissioning-Brookhaven Graphite Research Reactor (life-cycle estimate $53,221K)…….... 8,748 7,180 8,453

The Brookhaven Graphite Research Reactor was the world's first research reactor constructed solely for the peaceful use of atomic energy. The Reactor operated from 1950 to 1969. During the initial deactivation of the Reactor in 1969-1972, the spent reactor fuel was removed from the reactor and shipped to DOE's Savannah River Site. Also, the water within the spent fuel canal was pumped to Brookhaven National Laboratory's Waste Concentration Facility for storage and processing. These actions removed the majority (more than 95%) of the radioactive material from the facility. However, the reactor core (graphite moderator) contains residual contamination and the spent fuel canal and cooling air ducts are contaminated with fission products, such as strontium-90 and cesium-137. This PBS scope characterizes, stabilizes, decontaminates and decommissions the Brookhaven Graphite Research Reactor to remove or isolate sources of contamination and reduce any potential risk to human health and the environment. The Brookhaven Graphite Research Reactor is an Area of Concern under the Brookhaven National Laboratory Comprehensive Environmental Response, Compensation, and Liability Act Interagency Agreement. The acceleration of the end-state decision and decontamination and decommissioning of the Brookhaven Graphite Research Reactor is identified as Strategic Initiative 3 in the Brookhaven National Laboratory Performance Management Plan. This initiative accelerates the end-state determination and Record of Decision for the Brookhaven Graphite Research Reactor by up to one year (from FY 2005 to FY 2004), allowing completion of decontamination and decommissioning by the end of FY 2005, and contributing to completion of all EM scope at Brookhaven (including the High Flux Beam Reactor) by the end of FY 2008.

The end-state of this project will be decided with the approval of the Record of Decision for the Brookhaven Graphite Research Reactor. Continuing activities, such as access controls and surveillance and maintenance for the Brookhaven Graphite Research Reactor will be transferred to the landlord (Office of Science) in FY 2006. This project was recently reassessed and work tasks resequenced to reduce technical, programmatic, and environmental risks, thereby increasing confidence that the project will be completed in a safe, cost-effective, and timely manner. Corrective actions resulting from the assessment have integrated parts of the project scope to ensure a comprehensive and efficient regulatory strategy; accelerated the end-state decision and Record of Decision by nearly one year; and corrected scope omissions, including lack of a comprehensive risk assessment and supporting engineering information for end-state discussions.

The project is currently assessing the disposition of key Brookhaven Graphite Research Reactor structures such as the pile, the reactor building, below grade ducts, and the canal. A Risk Assessment, Feasibility Study, and Proposed Remedial Action Plan will be prepared to provide a foundation for the remaining remediation. To date, the following structures have been remediated: pile fans and sump removed, pile sealed, Building 701 isolated from Building 703, above grade structures of canal and

(dollars in thousands)

water treatment houses demolished, dismantled and shipped to the above grade ducts for disposal, coolers removed from the below grade ducts, remediated below grade piping to and from the canal and portions of the canal walls, and completed characterization of Building 701, the pile, remaining soils, and the above grade and below grade ducts.

In FY 2005, the following activities are planned to support the accelerated cleanup of Brookhaven National Laboratory.

- Work activities will be conducted to complete actions described in the Record of Decision which include further remediation on the below grade portions of the canal, the below grade ducts, and Building 701, as required. Verification and final status surveys will be conducted and closure reports written.

Metrics	FY 2003	FY 2004	FY 2005	Cumulative Complete FY 2005	Life-cycle Quantity	FY 2005 % Complete
Radioactive Facility Completions (Number of Facilities)……..	0	1	3	7	7	100%
Remediation Complete (Number of Release Sites)……..	0	0	0	1	1	100%

Key Accomplishments (FY 2003) / Planned Milestones (FY 2004 / FY 2005)

- Completed planning for and initiated removal action for a large fraction of the source term remaining in the below grade ducts Filters and Liners (FY 2003).
- Submit Brookhaven Graphite Research Reactor Draft Record of Decision to the regulators to determine final end-state for Brookhaven Graphite Research Reactor (January 2004).
- Complete removal of below ground piping (April 2004).
- DOE submit draft below grade duct completion report to regulators, demonstrating completion of decontamination and decommissioning, for review and comment (July 2005).

CH-PPPL-0030 / Soil and Water Remediation-Princeton Site A/B (life-cycle estimate $554K)…….…. 0 124 0

Potentially Responsible Party payments are required to cover DOE's responsibility, as a previous lessee, for a portion of the characterization/remediation costs for cleanup of soil and groundwater volatile organic compounds contamination at Princeton University's Site A/B, in accordance with the New Jersey Department of Environmental Protection/Princeton University Memorandum of Understanding and DOE/Princeton University Memorandum of Agreement. Potentially Responsible Party payments began in 1995 and are expected to continue through FY 2004.

(dollars in thousands)

FY 2003	FY 2004	FY 2005

In FY 2005, the following activities are planned to support the Princeton Site A/B.

- No activities are planned for FY 2005.

Metrics	FY 2003	FY 2004	FY 2005	Cumulative Complete FY 2005	Life-cycle Quantity	FY 2005 % Complete
No metrics associated with this PBS……						

Key Accomplishments (FY 2003) / Planned Milestones (FY 2004 / FY 2005)

- Payment of DOE's annual portion, as a Potentially Responsible Party, for characterization and remediation costs (September 2004).

OH-WV-0012 / Spent Nuclear Fuel Stabilization and Disposition-West Valley (life-cycle estimate $29,403K)…….. 3,571 0 0

The West Valley Demonstration Project Spent Nuclear Fuel project encompassed activities required to safely manage and store 125 Spent Nuclear Fuel assemblies, prepare them for shipment to the Idaho National Engineering and Environmental Laboratory per a joint agreement between the states of New York and Idaho, and deactivate/decontaminate the Fuel Receiving and Storage Facility where the assemblies have been stored since the 1960's. Completion of these efforts reduced environmental and worker risk at the site and helped position the Project to support initiation of a closure contract for Project decommissioning planned to begin in 2005, consistent with the West Valley Demonstration Project accelerated plan for completion.

The Spent Nuclear Fuel was shipped to the Idaho National Engineering and Environmental Laboratory in July 2003, and the Fuel Receiving and Storage Facility was deactivated and decontaminated.

- The required activities within this PBS were completed by the end of FY 2003.

Metrics	FY 2003	FY 2004	FY 2005	Cumulative Complete FY 2005	Life-cycle Quantity	FY 2005 % Complete
No metrics associated with this PBS……						

Key Accomplishments (FY 2003) / Planned Milestones (FY 2004 / FY 2005)

- Completed decontamination and deactivation of the Fuel Receiving and Storage Facility (FY 2003).
- Completed shipment of Spent Nuclear Fuel to the Idaho National Engineering and Environmental Laboratory (FY 2003).

(dollars in thousands)

FY 2003	FY 2004	FY 2005

VL-ITL-0030 / Soil and Water Remediation-Inhalation Toxicology Laboratory (life-cycle estimate $7,910K)…….. 1,065 476 491

Remedial activities for contaminated soil and groundwater at the site were completed in 1997. Currently, the environmental management mission at the Inhalation Toxicology Laboratory is comprised of two projects: (a) groundwater monitoring and reporting and (b) legacy waste disposal. The groundwater monitoring is at two sites, the Sewage Lagoon Site and the Diesel Spill Site, pursuant to conditions imposed by the State. Monitoring is to continue until no contamination is observed above regulatory standards for four consecutive semiannual sampling events for the Lagoon Site and eight consecutive quarterly sampling events for the Diesel Site. Labs and facilities that are contaminated from DOE projects have been vacated and are in the process of being surveyed, decontaminated, and released for other research purposes. Legacy low-level radioactive waste and hazardous waste within the laboratories and facilities, is being identified and disposed of as funding permits.

In FY 2005, the following activities are planned to support the completion of the Environmental Management mission at the Inhalation Toxicology Laboratory.

- Pursuant to conditions of the New Mexico Environment Department, conduct and report on semi-annual groundwater monitoring for the Sewage Lagoon Site for eight wells for four parameters and annual monitoring for three wells for the same four parameters. Conduct and report on semi-annual groundwater monitoring for the Diesel Spill Site for one well for a variety of diesel related parameters.
- Collect, remove, characterize, bulk, package, and dispose of expired outdated, or unused chemicals. Unlabeled chemicals will be analyzed and characterized. Chemicals will be disposed as appropriate.
- Collect, characterize and package radioactive waste for disposal. Radioactive items to be removed include old research samples, tissue blocks, contaminated equipment and instruments, small gloveboxes, lab coats and other clothing and miscellaneous lab items. The labs will be surveyed and surfaces decontaminated.
- Complete all characterization and documentation and perform quality assurance procedures for shipment of one low-level waste containter (35 m^3). Perform required rad surveys of container and truck prior to release. Ship to the Nevada Test Site.

Metrics	FY 2003	FY 2004	FY 2005	Cumulative Complete FY 2005	Life-cycle Quantity	FY 2005 % Complete
LLW/MLLW Disposed (m^3)……..	165	35	35	235	395	59%
Remediation Complete (Number of Release Sites)……	0	0	0	9	9	100%

Key Accomplishments (FY 2003)/Planned Milestones (FY 2004/FY 2005)

- Disposed of 3 metric tons of hazardous waste through a commercial licensed chemical disposal company (FY 2003).

(dollars in thousands)

FY 2003	FY 2004	FY 2005

- Cleared eight more laboratories of low-level radioactive and hazardous waste (FY 2003).
- Conduct groundwater monitoring and reporting (September 2004/ September 2005).
- Dispose of 35 m^3 of low-level waste (September 2004/September 2005).

VL-GA-0012 / Spent Nuclear Fuel Stabilization and Disposition-General Atomics (life-cycle estimate $13,629K)….. 1,575 0 0

The General Atomic Hot Cell Facility is a privately-owned, Nuclear Regulatory Commission-licensed nuclear facility in LaJolla, California. In the 1950s, DOE contracted with General Atomics for various research programs. In the early 1990s, the DOE work was completed leaving the contaminated Hot Cell Facility to be decontaminated and decommissioned. This project consisted of the decontamination and decommissioning of the General Atomics Hot Cell Facility and cleanup of the associated yard area and disposition of stored DOE owned irradiated fuel materials. Hot Cell Facility decommissioning activities were completed in 2001. In FY 2003 irradiated fuel materials were shipped to the Idaho National Environmental and Engineering Laboratory for interim storage, completing all EM project scope at the site. Project end-state was accompanied with regulatory release for unrestricted use for the Hot Cell Facility yard area and the irradiated fuel materials storage area.

- No activities are planned in FY 2005.

Metrics	FY 2003	FY 2004	FY 2005	Cumulative Complete FY 2005	Life-cycle Quantity	FY 2005 % Complete
SNF Packaged for Final Disposition (MTHM)……..	0	0	0	1	1	100%
LLW/MLLW Disposed (m^3)……..	0	0	0	1716	1716	100%
Remediation Complete (Number of Release Sites)……..	0	0	0	2	2	100%

Key Accomplishments (FY 2003) / Planned Milestones (FY 2004/ FY2005)

- Shipped irradiated fuel materials (FY 2003).

VL-LBNL-0030 / Soil and Water Remediation-Lawrence Berkeley National Laboratory (life-cycle estimate $33,758K)… 3,134 3,228 4,070

The activities performed under this PBS are directed at the investigation and clean up of past releases of hazardous and radioactive waste in soil and groundwater that may have occurred at Lawrence Berkeley National Laboratory and are under the purview of the Resource Conservation and Recovery Act. Lawrence Berkeley National Laboratory has completed its Resource Conservation and Recovery Act

(dollars in thousands)

FY 2003	FY 2004	FY 2005

Facility Investigation for 181 release sites to determine the amount and extent of contamination. Pilot testing to evaluate different remedial systems for use at Lawrence Berkeley National Laboratory will be completed in FY 2004. If successful, the results will be utilized to recommend full-scale remediation systems that will be constructed in FY 2005 and FY 2006. Lawrence Berkeley will meet the Environmental Management site end-state by reducing contaminants to acceptable levels or eliminating contamination in soil and completing construction to meet remediation objectives in groundwater. The end-state of this project will be the completion of the final remediation systems in FY 2006 and the transfer of long-term surveillance and maintenance responsibilities to the site landlord, the Office of Science beginning in FY 2007.

Operation of treatment systems will be transferred to the site landlord, the Office of Science, after completion of construction in FY 2006. The site landlord will continue surveillance and monitoring of the site.

In FY 2005, the following activities are planned to support the accelerated cleanup of Lawrence Berkeley National Laboratory.

- Obtain regulatory approval of the Corrective Measures Study, implement remedial actions and initiate construction of treatment systems, as identified for final corrective measures.
- Continue monitoring, maintenance and operations at the B-7 enhanced soil vapor extraction system, B-7 soil flushing system, B-64 soil flushing system, and B-7, B-25, B-58 and B-53/58 trenches groundwater treatment systems.
- Complete construction of in-situ chemical oxidation groundwater system at B-71 and startup system at B-52 to treat volatile organic compounds.
- Begin application of hydrogen and oxygen release compounds at the B-69 Area, B-77 Area, and B-76/75 Area to treat low levels of contamination in groundwater.

Metrics	FY 2003	FY 2004	FY 2005	Cumulative Complete FY 2005	Life-cycle Quantity	FY 2005 % Complete
Remediation Complete (Number of Release Sites)……	23	5	6	172	181	95%

Key Accomplishments (FY 2003) / Planned Milestones (FY 2004/ FY 2005)

- Continued Interim Corrective Measure operations to prevent off-site migration and removal of groundwater contaminant source areas (FY 2003).
- Completed the soil removal action to excavate Polychlorinated Biphenyl/Tritium contaminated soil at B-75 (FY 2003).
- The remaining inventory of legacy waste will be dispositioned (FY 2003).
- Complete pilot remedial systems test construction (March 2004).

	(dollars in thousands)		
	FY 2003	FY 2004	FY 2005

- Implement remedial actions and construct treatment systems identified in corrective measures studies (September 2005).

VL-LEHR-0040 / Nuclear Facility Decontamination and Decommissioning-Laboratory for Energy-Related Health Research (life-cycle estimate $40,577K)……	**4,049**	**3,273**	**500**

The Laboratory for Energy-Related Health Research conducted research from the 1950s through 1980s on the effects of radiation on humans by exposing dogs to various radionuclides. These research activities resulted in the chemical and radioactive contamination of the site and various facilities. This PBS involves the cleanup of the contamination and includes: 1) decontamination and decommissioning of radioactive contaminated facilities; 2) removal of on-site radioactive sources and wastes; 3) remediation and/or removal of soil contamination (radiological and/or hazardous) at southwest trenches, Radium and Strontium Treatment Systems, domestic septic tanks, outdoor dog pens (western and eastern dog pens) and DOE disposal box; 4) closure or removal of underground tanks; 5) verification of cleanup completion; and 6) post closure monitoring as required by the Comprehensive Environmental Response, Compensation and Liability Act for National Priority List sites.

The cleaned facilities and land will be returned to the University of California, Davis for continued use as an educational/research facility. The following removal actions have been completed: a time-critical removal action in the DOE disposal box area, and non-time-critical removal actions in the southwest trenches, the Radium and Strontium Treatment Systems, the western dog pens areas, and the domestic septic systems. These removal actions have eliminated the major risks at the site. Most of the legacy waste, including sources, and waste generated from the southwest trenches, DOE disposal box area, and the Radium and Strontium Treatment Systems have been disposed off-site. Since 1998, 5,050 cubic yards of low-level waste including remediated soil, 250 cubic yards of hazardous waste and 1 cubic yard of mixed waste have been disposed off-site.

The acceleration plan for cleanup of the site will result in completion by the end of FY 2005. The remaining cleanup work includes: disposal of all remaining remediation waste generated from the western dog pens and domestic septic systems (about 3,000 cubic yards); disposal or reusing southwest trench overburden soil (about 400 cubic yards); disposal of remaining sanitary waste (about 50 cubic yards); disposal of contaminated equipment and miscellaneous waste (about 50 cubic yards); disposal of thorium source; remediating the eastern dog pens (i.e., excavate the contaminated media or consumate an agreement for University of California, Davis to incorporate the eastern dog pen area into its landfill cap); transferring title of DOE-owned buildings to the University of California, Davis; and delisting DOE areas from the National Priority List.

In FY 2005, the following activities are planned to support the accelerated cleanup of Laboratory for the Energy-Related Health Research.

- Complete the Final Feasibility Study, Proposed Plan, Record of Decision, the Remedial Action Plan, and submit to regulators for approval.
- Initiate transfer of activities to the Office of Legacy Management.

(dollars in thousands)

FY 2003	FY 2004	FY 2005

- University of California and DOE to enter into negotiations on final responsibility for Long-Term Stewardship activities.

Metrics	FY 2003	FY 2004	FY 2005	Cumulative Complete FY 2005	Life-cycle Quantity	FY 2005 % Complete
LLW/MLLW Disposed (m^3)……..	0	4	0	948	948	100%
Industrial Facility Completions (Number of Facilities)…….	0	1	0	1	1	100%
Remediation Complete (Number of Release Sites)…….	3	1	0	17	17	100%

Key Accomplishments (FY 2003) / Planned Milestones (FY 2004/ FY 2005)

- Completed remediation of three of the remaining four (out of 17) release sites (FY 2003).
- Majority of remaining remediation waste will be disposed off-site; begin remediation of the eastern dog pens area (the last major removal action); the last of the legacy waste sources will be disposed off-site (September 2004).
- Submit final Record of Decision and Remedial Action Plan to regulators (September 2005).

VL-SLAC-0030 / Soil and Water Remediation-Stanford Linear Accelerator Center (life-cycle estimate $20,599K)…….... 2,605 2,384 2,500

Activities in this PBS involve the cleanup of legacy contamination resulting from physics research mission operations over the past several decades at the Stanford Linear Accelerator Center. The EM mission includes the identification of chemical contaminants in soil and groundwater, and developing and implementing remedies to address these environmental concerns using Comprehensive Environmental Response, Compensation, and Liability Act technical guidance. The principle contaminants of concern include polychlorinated biphenyls, lead, and volatile organic compounds in soils and groundwater. There are no radiologically contaminated areas or contaminated buildings that require remediation at Stanford Linear Accelerator Center. Preliminary Site Assessments have identified 20 release sites requiring remediation.

The strategy to accelerate the completion of the project includes tasks which are being worked in parallel rather than in series, whenever possible. Installing and testing treatment systems initially, as presumptive remedies, are occurring at the same time as the remedial investigation/feasibility study reports are processed through the approval cycle. Soils contaminated with polychlorinated biphenyls are being characterized to determine the extent of the contamination and the work will be carried out through an interim removal action, before reports are submitted for approval to regulators. This will lower the overall risk at the site, and thus, reduce the number of potential issues with the proposed

(dollars in thousands)

remedial solution. The EM end-state is to return long-term surveillance and maintenance activities for remediated site areas to the Office of Science by the end of FY 2006.

In FY 2005, the following activities are planned to support the accelerated cleanup of Stanford Linear Accelerator Center.

- Complete construction of a groundwater treatment system at the Former Hazardous Waste Storage Area to control off-site migration of the southern plume.
- Complete construction of a dual phase vapor extraction and thermal treatment system to remove source contaminants in the northern portion of the Former Hazardous Waste Storage Area.
- Continue operation, surveillance and maintenance of on-going removal actions implemented in prior years.

Metrics	FY 2003	FY 2004	FY 2005	Cumulative Complete FY 2005	Life-cycle Quantity	FY 2005 % Complete
Remediation Complete (Number of Release Sites)……	0	3	0	19	20	95%

Key Accomplishments (FY 2003) / Planned Milestones (FY 2004/ FY 2005)

- Stanford Linear Accelerator Center completed characterization of the final ten potential release sites from the 922 potential release sites identified in the Preliminary Site Wide Assessments (FY 2003).
- Construct engineering controls at the IR6 Drainage Channel (September 2004).
- Complete removal action at the Former Hazardous Waste Storage Area (September 2004).
- Complete removal action at the Plating Shop (September 2004).
- Complete construction and installation of groundwater treatment facilities at southern and northern portions of the Former Hazardous Waste Storage Area (September 2005).
- Complete Lower Salvage Yard Removal Action (September 2005).

Total, 2006 Accelerated Completions……...	**53,972**	**48,412**	**45,435**

Explanation of Funding Changes

	FY 2005 vs. FY 2004 ($000)
CH-ANLE-0030 / Soil and Water Remediation-Argonne National Laboratory –East	
▪ Decrease is due to the completion of remedial actions in FY 2003 and completion of remaining transition activities in FY 2004. Only operation, monitoring and maintenance of the remedial systems continue in FY 2005……	-1,117
CH-BRNL-0030 / Soil and Water Remediation-Brookhaven National Laboratory	
▪ Decrease is due to the completion of soils and sediment cleanup and groundwater treatment system construction and start-up……...…..……	-1,209
CH-BRNL-0040 / Nuclear Facility Decontamination and Decommissioning-Brookhaven Graphite Research Reactor	
▪ Increase is needed for the completion of Brookhaven Graphite Research Reactor decontamination and decommissioning activities in FY 2005…….. ….	1,273
CH-PPPL-0030 / Soil and Water Remediation-Princeton Site A/B	
▪ Decrease is due to no planned activity and no funds requested in FY 2005……...	-124
VL-ITL-0030 / Soil and Water Remediation-Inhalation Toxicology Laboratory	
▪ No significant change……..	15
VL-LBNL-0030 / Soil and Water Remediation-Lawrence Berkeley National Laboratory	
▪ Increased funding supports the transition from the Corrective Measures Study phase to the final implementation of remedial actions and construction of treatment systems……	842
VL-LEHR-0040 / Nuclear Facility Decontamination and Decommissioning-Laboratory for Energy-Related Health Research	
▪ Significant decrease in funding due to EM mission completion in FY 2005……..	-2,773
VL-SLAC-0030 / Soil and Water Remediation-Stanford Linear Accelerator Center	
▪ Slight increase to implement removal actions scheduled in FY 2005……	116
Total Funding Change, 2006 Accelerated Completions…….	**-2,977**

2012 Accelerated Completions

Funding Schedule by Activity

(dollars in thousands)

	FY 2003	FY 2004	FY 2005	$ Change	% Change
CH-ANLE-0040/Nuclear Facility Decontamination and Decommissioning-Argonne National Laboratory-East……	521	343	397	54	15.7%
CH-BRNL-0041/Nuclear Facility Decontamination and Decommissioning-High Flux Beam Reactor……..	1,166	1,302	5,734	4,432	340.4%
OH-WV-0013/Solid Waste Stabilization and Disposition-West Valley……	21,753	39,260	41,000	1,740	4.4%
OH-WV-0040/Nuclear Facility Decontamination and Decommissioning-West Valley……	68,924	59,900	32,000	-27,900	-46.6%
VL-ETEC-0040/Nuclear Facility Decontamination and Decommissioning-Energy Technology Engineering Center…….	16,436	18,217	19,000	783	4.3%
VL-FOO-0013B-N/Solid Waste Stabilization and Disposition-Oakland Sites-2012 (Non-Defense)……..	523	57	60	3	5.3%
Total, 2012 Accelerated Completions……	109,323	119,079	98,191	-20,888	-17.5%

Description

The Non-Defense Site Acceleration Completion appropriation, 2012 Accelerated Completions program provides funding for completing cleanup and closing down facilities contaminated as a result of nuclear energy research and development.

Benefits

This account provides funding to accelerate risk reduction and environmental cleanup at non-defense sites where cleanup will be completed by 2012 or certain cleanup projects within a site will be completed by 2012. As the cleanup of these sites and projects progress, the risk and hazard to human health and the environment is greatly reduced. In addition, as cleanup is completed and sites are closed, the financial resources needed to maintain site infrastructure will no longer be required. By focusing resources on accelerating risk reduction and cleanup rather than managing risk, the cleanup of these sites will be achieved in a shorter timeframe and at less cost.

This program includes all geographic sites with a planned closure date of 2007 through 2012 (e.g., Brookhaven National Laboratory, West Valley Demonstration Project). In addition, this program provides funding for EM sites where overall site cleanup will not be completed by 2012 but certain cleanup projects within a site (e.g., soil contamination remediated, all waste shipped off-site) will be completed by 2012.

Funding by Site

(dollars in thousands)

	FY 2003	FY 2004	FY 2005	$ Change	% Change
Chicago					
Argonne National Laboratory – East……	521	343	397	54	15.7%
Brookhaven National Laboratory……..	1,166	1,302	5,734	4,432	340.4%
Total, Chicago Operations Office……..	1,687	1,645	6,131	4,486	272.7%
NNSA Service Center					
Energy Technology Engineering Center..	16,436	18,217	19,000	783	4.3%
Former Oakland Operations Office…….	523	57	60	3	5.3%
Total, NNSA Service Center……..	16,959	18,274	19,060	786	4.3%
Ohio					
West Valley Demonstration Project……..	90,677	99,160	73,000	-26,160	-26.4%
Total, 2012 Accelerated Completions……	109,323	119,079	98,191	-20,888	-17.5%

Detailed Justification

(dollars in thousands)

	FY 2003	FY 2004	FY 2005
CH-ANLE-0040 / Nuclear Facility Decontamination and Decommissioning - Argonne National Laboratory-East (life-cycle estimate $34,880K)……..…	**521**	**343**	**397**

Historic operations at Argonne National Laboratory-East have focused on reactor research, and led to the construction/operation of several reactors. Many of these facilities are no longer in service, are surplus, and are contaminated. These facilities are being decontaminated and decommissioned to remove accessible radioactive contamination for unrestricted facility/area release or, if not feasible, for demolition. This PBS scope supports decontamination and decommissioning activities at the Argonne National Laboratory-East facilities to comply with requirements of the applicable DOE Orders. Three facilities (Building 301 Hot Cells, Juggernaut Reactor, and the Zero Power Reactor), remain to be decontaminated and decommissioned at Argonne National Laboratory-East. These facilities are currently in a safe shutdown condition, are under continuing surveillance and monitoring, and do not currently pose an unmanaged risk to the environment, workers, or the public.

The EM end-state of this project is the decontamination and decommissioning of the remaining facilities within the EM program. Any continuing activities, such as soil or groundwater monitoring will be transferred to the landlord (Office of Science) at Argonne National Laboratory-East. With the

(dollars in thousands)

completion of the decontamination and decommissioning scope by the end of FY 2009, the EM Program at Argonne National Laboratory-East will be completed.

In FY 2005, the following activities are planned to support the accelerated cleanup of the Argonne National Laboratory-East.

- Continue surveillance and monitoring of surplus and radiologically contaminated facilities and grounds.

Metrics	FY 2003	FY 2004	FY 2005	Cumulative Complete FY 2005	Life-cycle Quantity	FY 2005 % Complete
Radioactive Facility Completions (Number of Facilities)……	0	0	0	63	78	81%

Key Accomplishments (FY 2003)/Planned Milestones (FY 2004/ FY 2005)

- Continued surveillance and monitoring of the surplus and radiologically contaminated facilities and grounds (FY 2003).
- Continue surveillance and monitoring of the facilities and grounds, to ensure protection of site workers and the environment (September 2004).
- Continue surveillance and maintenance activities (September 2005).

CH-BRNL-0041 / Nuclear Facility Decontamination and Decommission High Flux Beam Reactor (life-cycle estimate $120,293K)…… 1,166 1,302 5,734

The High Flux Beam Reactor served as a significant cornerstone of research in physics, materials technology, and biomedical sciences at Brookhaven National Laboratory for over three decades, beginning in 1965. The High Flux Beam Reactor was a heavy water moderated and cooled reactor, which used highly enriched uranium to produce an operating power level of 30-60 mega watts thermal. In 1997, a tritium plume stemming from a leak in the reactor's spent fuel storage pool was identified and reactor operations were halted. In 1999, the High Flux Beam Reactor was permanently shut down. From 1999-2001, DOE stabilized the facility for long-term safe shut down. This PBS scope stabilizes, characterizes, deactivates and decommissions the High Flux Beam Reactor, and associated buildings at Brookhaven National Laboratory. The High Flux Beam Reactor Decontamination and Decommission Project mission is to develop end-state alternatives for the disposition of the facility, select the final end-state, and conduct the planning, engineering, and implementation of the activities necessary to achieve the selected end-state. In addition, the scope includes activities to perform routine facility maintenance and remove certain systems structures, and components inside the Reactor and to facilitate the implementation of a long-term minimal surveillance and maintenance program that will be required while the facility awaits full decommissioning.

(dollars in thousands)

FY 2003	FY 2004	FY 2005

The acceleration of decontamination and decommissioning of the High Flux Beam Reactor is identified as Strategic Initiative 4 in the Brookhaven National Laboratory Performance Management Plan. This includes advancing the end-state determination for the High Flux Beam Reactor to accelerate completion of the resulting decontamination and decommissioning by one year from FY 2009 to FY 2008. With the completion of the High Flux Beam Reactor Decontamination and Decommissioning, the EM Program at Brookhaven National Laboratory will be completed. FY 2004 activities include planning and initial engineering for facility decommissioning, as well as continuing surveillance and maintenance activities, in support of a FY 2008 completion.

In FY 2005, the following activities are planned to support the accelerated cleanup of the Brookhaven National Laboratory.

- In support of Strategic Initiative 4, Accelerate Decontamination and Decommissioning of the High Flux Beam Reactor: planning and engineering for facility decommissioning will continue to be performed.
- Perform decontamination of systems, structures and components.
- Perform partial demolition and removal of selected systems and structures. Waste disposal will occur from demolition activities.
- Continue to perform routine facility maintenance, remove certain systems, structures and components and facilitate the implementation of a long-term, minimal surveillance and maintenance program that will be required while the facility awaits full decommissioning.

Metrics	FY 2003	FY 2004	FY 2005	Cumulative Complete FY 2005	Life-cycle Quantity	FY 2005 % Complete
No metrics are associated with this PBS……						

Key Accomplishments (FY 2003)/Planned Milestones (FY 2004/ FY 2005)

- Continued to perform surveillance and maintenance activities to maintain the facility in a safe condition (FY 2003).
- Continue to perform surveillance and maintenance activities (September 2004).
- Planning and engineering for facility decommissioning will continue including decontamination, partial demolition, and removal of selected structures and components (September 2005).

OH-WV-0013 / Solid Waste Stabilization and Disposition-West Valley (life-cycle estimate $266,505K)…….... 21,753 39,260 41,000

The solid waste stabilization and disposition project at the West Valley Demonstration Project involves the waste management activities required, per the West Valley Demonstration Project Act of 1980

(dollars in thousands)

FY 2003	FY 2004	FY 2005

associated with identifying disposition pathways and dispositioning low-level and transuranic waste produced as a result of high-level waste vitrification activities. When this project is complete in FY 2008, all generated low-level waste and transuranic waste will have been shipped off-site for disposal, reducing worker and environmental risk at the site. In order to prepare for legacy waste disposition efforts associated with transuranic and other high activity waste, construction of a Remote Handled Waste Facility will be completed and operational in FY 2004 which will provide the capability to safely characterize, size reduce, package and prepare waste for off-site shipment and disposal. Preparations for opening disposition pathways for low-level and transuranic waste are underway.

In FY 2005, the following activities are planned to support West Valley.

- Operate Remote Handled Waste Facility to process transuranic and other high activity waste for disposal.
- Continue waste management operations for disposal of low-level waste.

Metrics	FY 2003	FY 2004	FY 2005	Cumulative Complete FY 2005	Life-cycle Quantity	FY 2005 % Complete
TRU Waste Shipped for Disposal at WIPP (m^3)……	0	0	0	0	692	0%
LLW/MLLW Disposed (m^3)…….	0	0	500	4,522	23,844	19%

Key Accomplishments (FY 2003)/Planned Milestones (FY 2004/FY 2005)

- Achieved 80% construction complete for the Remote Handled Waste Facility including completion of utilities and installation of major mechanical and electrical components (FY 2003).
- Complete construction of the Remote Handled Waste Facility and initiate readiness operations consistent with the West Valley Demonstration Project accelerated plan for completion (September 2004).
- Award New Closure Contract for Disposition of West Valley Demonstration Project low-level waste and transuranic waste (December 2004).

OH-WV-0040 / Nuclear Facility Decontamination and Decommissioning - West Valley (life-cycle estimate $423,035K) **68,924** **59,900** **32,000**

The decontamination and decommissioning program at the West Valley Demonstration Project involves those activities required, per the West Valley Demonstration Project Act of 1980, to decontaminate and decommission the facilities, tanks and hardware used in connection with the Project. Decommissioning criteria for the West Valley Demonstration Project were established by the Nuclear Regulatory Commission in 2002. Decontamination and decommissioning will be performed to most effectively reduce worker, public, and environmental risk at the West Valley Demonstration Project. To support

(dollars in thousands)

decontamination and decommissioning efforts, this program also involves those activities required to safely manage and maintain the site in compliance with federal and state statutes, as well as DOE orders and mandates. An Environmental Impact Statement and subsequent Record of Decision for Decommissioning and/or Long-Term Stewardship of the West Valley site is currently under development by DOE and New York State, the West Valley site owner. Decontamination performed through the end of 2004 will support the Nuclear Regulatory Commission decommissioning dose criteria, and support overall risk reduction. Activities from FY 2005 through FY 2008 will then be associated with further decontaminating, demolishing and/or dismantling Project facilities in order to minimize site surveillance and maintenance requirements associated with maintaining the high-level waste canisters on-site. The high-level waste canisters are currently stored in a cell in the former spent fuel reprocessing facility. They will remain safely configured in their current storage location until their final disposition to a federal repository. Once the canisters are dispositioned, final decontamination and decommissioning will be performed consistent with the Decommissioning Record of Decision to complete the final mandate of the West Valley Demonstration Project Act. In FY 2003, decontamination operations in the General Purpose Cell and Process Mechanical Cell continued; decontamination in the Product Purification Cell and Extraction Cell #2 was initiated; public scoping meetings were held and development of a revised draft Decommissioning Environmental Impact Statement began.

In FY 2005, the following activities are planned to support the accelerated cleanup of the West Valley Demonstration Project.

- Complete dismantlement of the in-cell portion of the vitrification facility.
- Initiate removal and/or dismantlement of ancillary Project facilities/infrastructure.
- Maintain safe interim storage of 275 high-level waste canisters, legacy transuranic (approximately 692 m^3) and low-level waste (approximately 19,822 m^3).
- Continue development of the Decommissioning and/or Long-Term Stewardship Environmental Impact Statement.
- Continue safe site operations in compliance with federal and state regulations.

Metrics	FY 2003	FY 2004	FY 2005	Cumulative Complete FY 2005	Life-cycle Quantity	FY 2005 % Complete
Liquid Waste Tanks Closed (Number of Tanks)……	0	0	0	0	2	0%
Remediation Complete (Number of Release Sites)……..	0	0	0	0	1	0%

(dollars in thousands)

FY 2003	FY 2004	FY 2005

Key Accomplishments (FY 2003) / Planned Milestones (FY 2004/ FY 2005)

- Continued decontamination operations in the General Purpose Cell and Process Mechanical Cell, and initated decontamination operations in the Product Purification Cell and Extraction Cell #2 to reduce worker and environmental risk, as well as prepare the site for decommissioning (FY 2003).
- Maintained safe interim storage of high-level waste canisters, legacy transuranic and low-level waste (FY 2003).
- Continued development of the Decommissioning and/or Long-Term Stewardship Environmental Impact Statement (FY 2003).
- Complete decontamination operations in the General Purpose Cell and Process Mechanical Cell (June 2004).
- Issue the Waste Management Environmental Impact Statement, as well as Record of Decision (September 2004).
- Complete decontamination operations in the extraction Cell 2 (September 2004).
- Award New Closure Contract for Decontamination of Project Facilities (December 2004).
- Complete Dismantlement of Vitrification Facility In-Cell (December 2004).

VL-ETEC-0040 / Nuclear Facility Decontamination and Decommissioning-Energy Technology Engineering Center (life-cycle estimate $204,976K)……. 16,436 18,217 19,000

The Energy Technology Engineering Center historically was involved in testing reactor components and developing emerging energy technologies. During this testing and development mission, the site and facilities became contaminated. The purpose of this PBS scope is to: 1) clean up contaminated release sites; 2) decontaminate and decommission radioactive and chemically contaminated facilities for eventual release to Boeing (the site owner); 3) perform Resource Conservation and Recovery Act cleanup involving the remediation of both contaminated groundwater and soil; and 4) remove radioactive and hazardous waste from the site applying (when possible) waste minimization principles (e.g., recycling). The end-state is to complete cleanup in FY 2007 and return the site to Boeing North American, Incorporated.

In FY 2005, the following activities are planned to support the accelerated cleanup of the Energy Technology Engineering Center.

- Complete decontamination and decommissioning of B4059: Space Nuclear Auxiliary Power Reactor Prototype Facility, B4024: Space Nuclear Auxiliary Power Reactor Environmental Test Facility, and Radioactive Materials Handling Facility.

(dollars in thousands)

FY 2003	FY 2004	FY 2005

Metrics	FY 2003	FY 2004	FY 2005	Cumulative Complete FY 2005	Life-cycle Quantity	FY 2005 % Complete
LLW/MLLW Disposed (m^3)……..	98	390	600	1,225	1,335	92%
Radioactive Facility Completions (Number of Facilities)…….	0	1	2	6	6	100%
Industrial Facility Completions (Number of Facilities)…….	7	0	1	20	20	100%
Remediation Complete (Number of Release Sites)…….	0	3	3	10	10	100%

Key Accomplishments (FY 2003) / Planned Milestones (FY 2004/ FY 2005)

- Issued the Final Environmental Assessment (FY 2003).
- Shipped transuranic waste to Richland for interim storage (FY 2003).
- Start decontamination and decommissioning of Radioactive Materials Handling Facility (October 2003).
- Complete decontamination and decommissioning of the subsurface of Space Nuclear Auxiliary Power Reactor Prototype Facility (B4059) (August 2004).
- Complete decontamination and decommissioning of Space Nuclear Auxiliary Power Reactor Prototype Facility (B4059), Space Nuclear Auxiliary Power Reactor Environmental Test Facility (B4024) and the Radioactive Materials Handling Facility (September 2005).

VL-FOO-0013B-N / Solid Waste Stabilization and Disposition – Oakland Sites – 2012 (Non-Defense) (life-cycle estimate $6,537K)……. 523 57 60

The scope of work within this PBS achieves efficiencies by managing similar activities for waste management and environmental restoration at multi Non-Defense sites (Laboratory for Energy-Related Health Research, Stanford Linear Accelerator Center, Lawrence Berkeley National Laboratory, and Energy Technology Engineering Center). Rather than each project awarding its own separate contract, economies of scale are achieved by managing waste consolidation, characterization, aggregation, packaging, and transport-especially to commercial facilities. Services for site investigations, hydrogeologic studies, regulatory review, and stakeholder liaisons are also included within this project through wide applicability of these restoration activities to multiple projects/sites. This project will end when the underlying projects/sites supported by the waste management and environmental restoration activities achieve their end-state, and there is no longer a need for a separate project to achieve multi-project/site savings and efficiencies.

In FY 2005, the following activities are planned to support the accelerated cleanup of the California sites.

(dollars in thousands)

FY 2003	FY 2004	FY 2005

- Support ongoing environmental/safety activities and disposal activities related to all forms of waste.
- Continue to transport packaged wastes and materials to designated facilities.
- Perform assessment and cleanup tasks involving work plan preparation, site assessments, Resource Conservation and Recovery Act closures, environmental analysis, and other technical activities that pertain to environmental support.

Metrics	FY 2003	FY 2004	FY 2005	Cumulative Complete FY 2005	Life-cycle Quantity	FY 2005 % Complete
LLW/MLLW Disposed (m^3)……..	0	0	0	83	83	100%

Key Accomplishments (FY 2003) / Planned Milestones (FY 2004/FY 2005)

- There are no milestones associated with this PBS.

Total, 2012 Accelerated Completions…….	**109,323**	**119,079**	**98,191**

Explanation of Funding Changes

	FY 2005 vs. FY 2004 ($000)
CH-ANLE-0040 / Nuclear Facility Decontamination and Decommissioning - Argonne National Laboratory – East	
▪ No significant change. Surveillance and monitoring activities will continue…….	54
CH-BRNL-0041 / Nuclear Facility Decontamination and Decommissioning - High Flux Beam Reactor	
▪ Increase is due to the start of demolition and removal of systems and structures and the associated waste disposal; and decontamination of systems, structures and components……	4,432
OH-WV-0013 / Solid Waste Stabilization and Disposition - West Valley	
▪ The increase in funding represents the additional funds needed to support Remote Handled Waste Facility operations as it transitions into full operations. Additionally, efforts associated with waste disposal operations for legacy low-level waste will increase……	1,740

	FY 2005 vs. FY 2004 ($000)
OH-WV-0040 / Nuclear Facility Decontamination and Decommissioning - West Valley	
▪ The decrease in funding reflects the completion of decontamination efforts and characterization in the former spent fuel reprocessing facility including the General Purpose Cell, Process Mechanical Cell, and Extraction Cell #2…….	-27,900
VL-ETEC-0040 / Nuclear Facility Decontamination and Decommissioning - Energy Technology Engineering Center	
▪ The increase in funding is due to additional decontamination and decommissioning activities scheduled for completion in FY 2005..……..……...	783
VL-FOO-0013B-N / Solid Waste Stabilization and Disposition - Oakland Sites - 2012 (Non-Defense)	
▪ No significant change……..	3
Total Funding Change, 2012 Accelerated Completions…….	**-20,888**

2035 Accelerated Completions

Funding Schedule by Activity

(dollars in thousands)

	FY 2003	FY 2004	FY 2005	$ Change	% Change
HQ-GJ-0031/Soil and Water Remediation-Moab	3,856	4,440	7,773	3,333	75.1%
VL-LANL-0040-N/Nuclear Facility Decontamination and Decommissioning-Los Alamos National Laboratory	433	480	451	-29	-6.0%
Total, 2035 Accelerated Completions	4,289	4,920	8,224	3,304	67.2%

Description

The Non-Defense Site Acceleration Completion appropriation, 2035 Accelerated Completions program provides funding for completing cleanup and closing facilities contaminated as a result of nuclear energy research and development. This program provides funding for site closures and site specific cleanup and closure projects that are expected to be completed after 2012. EM has established a goal of completing cleanup at all its sites by 2035.

Benefits

This program provides funding to accelerate risk reduction and environmental cleanup at non-defense sites where cleanup will be completed by 2035. As the cleanup of these sites and projects progress, the risk and hazard to human health and the environment is greatly reduced. In addition, as cleanup is completed and sites are closed, the financial resources needed to maintain site infrastructure will no longer be required. By focusing resources on accelerating risk reduction and cleanup rather than managing risk, the cleanup of these sites will be achieved in a shorter timeframe and at less cost.

Funding by Site

(dollars in thousands)

	FY 2003	FY 2004	FY 2005	$ Change	% Change
Headquarters					
Atlas Site	3,856	4,440	7,773	3,333	75.1%
Los Alamos Site Office					
Los Alamos National Laboratory	433	480	451	-29	-6.0%
Total, 2035 Accelerated Completions	4,289	4,920	8,224	3,304	67.2%

Detailed Justification

(dollars in thousands)

FY 2003	FY 2004	FY 2005

HQ-GJ-0031 / Soil and Water Remediation - Moab (life-cycle estimate $186,034K)…… 3,856 4,440 7,773

This PBS covers remediation of the former Atlas Mill Site, with 13 million metric tonnes of contaminated mill tailings, mill debris, contaminated groundwater, and vicinity properties in Moab, Utah, under authority of the Uranium Mill Tailings Radiation Control Act. An Environmental Impact Statement will evaluate alternatives for remediation, with a focus on capping the tailings in place or relocation to a commercial facility or DOE constructed repository. Vicinity properties contaminated with mill tailings as a result of past construction practices will be remediated and contaminated materials will be disposed in conjunction with the mill site cleanup.

When remediation is complete, disturbed areas around the former millsite will be restored to pre-mill conditions, and institutional controls on land and surface and groundwater use may be necessary to protect human health and the environment. The site is of particular public interest due to its unique setting on the banks of the Colorado River. The tailings pile is leaching contaminants to the river through the groundwater, potentially impacting critical habitat for endangered native fish species. Local citizens are concerned about the environmental effects posed by the pile, and downstream water users in Southern California are concerned about contaminants entering the river. Public interest is also heightened by the site's proximity to a Nature Conservancy wetlands preserve directly across the river and its shared boundary with Arches National Park.

The end-state will be achieved after contaminated soil, tailings, vicinity properties, and surface and ground water are remediated. Specific actions to be taken will be determined by the results of the Environmental Impact Statement. The site will then be transferred to the Office of Legacy Management for monitoring and required stewardship.

In FY 2005, the following activities are planned to support the accelerated cleanup of the Moab Site.

- Additional studies to accelerate design and implementation of proposed groundwater corrective action.
- Operation/optimization of interim groundwater corrective actions to accelerate interim protection of threatened and endangered aquatic species in the Colorado River.
- Monitor surface and groundwater in accordance with Environmental Impact Statement compliance strategy.
- Operation and maintenance of the site including tailings dewatering system, access controls, health and safety, surface controls, and air monitoring.
- Substantially complete detailed conceptual design of selected remedial action.
- Initiate characterization, design and remediation of vicinity properties.
- Construct initial site infrastructure for accelerated site clean up and dispose of mill site remnant legacy chemicals.
- Remediate contaminated soils on millsite.

(dollars in thousands)

FY 2003	FY 2004	FY 2005

Metrics	FY 2003	FY 2004	FY 2005	Cumulative Complete FY 2005	Life-cycle Quantity	FY 2005 % Complete
No metrics associated with this PBS…….						

Key Accomplishments (FY 2003)/Planned Milestones (FY 2004/ FY 2005)

- Initiated preparation of an Environmental Impact Statement to support selection of final mill site, vicinity property, and surface and groundwater remedy (FY 2003).
- Implemented Interim Groundwater Action to reduce ammonia concentrations reaching the river (FY 2003).
- Remediated portions of the State Highway 191 right-of-way within DOE property boundary in conjunction with the State highway-widening project (FY 2003).
- Complete Final Environmental Impact Statement (September 2004).
- Issue Record of Decision (December 2004).
- Complete conceptual design of disposal cell (March 2005).
- Complete disposal of remnant chemicals (September 2005).
- Complete radiological assessment of mill site soils (September 2005).

VL-LANL-0040-N / Nuclear Facility Decontamination and Decommissioning - Los Alamos National Laboratory (Non-Defense) (life-cycle estimate $17,848K)…….. 433 480 451

The Tritium System Test Assembly Facility was transferred into the EM Program in FY 2003 for demolition. This transfer is documented in a Memorandum of Agreement that was signed by EM, Defense Programs, and the Office of Science on March 19, 2002. Prior to transfer, the facility was placed in a safe shutdown mode. The shutdown mode is documented in an end point transition report. Several gloveboxes, which contain small amounts of radioactive tritium residue, will be left in place as approved and documented in the Safety Authorization Basis. As a result, the facility emissions stack system will continue to be operational. Until the ultimate disposition of the facility is achieved, which is demolition and disposal of resulting waste, the facility will remain in a shutdown mode, and surveillance and maintenance activities will be performed. Surveillance and maintenance activities include facility walk-throughs, maintaining the Safety Authorization Basis, stack monitoring, and security.

The end-state of this activity, to occur in FY 2011, is completion of decontamination and decommissioning of all transferred contaminated facilities such that specific facilities or portions thereof, as appropriate are made available for reuse by the site landlord, with appropriate restrictions. In the case of any facilities demolished as part of the decontamination and decommissioning process, the remediated facility sites may be transferred to the site landlord along with responsibility for any long term monitoring.

(dollars in thousands)

FY 2003	FY 2004	FY 2005

In FY 2005, the following activities are planned to support the accelerated cleanup of the Los Alamos National Laboratory.

- Continue surveillance and maintenance for the Tritium Systems Test Assembly facility, which includes maintaining air emissions permit, facility walk-throughs, maintaining the safety basis authorization, stack monitoring, and security.

Metrics	FY 2003	FY 2004	FY 2005	Cumulative Complete FY 2005	Life-cycle Quantity	FY 2005 % Complete
Radioactive Facility Completions (Number of Facilities)……..	0	0	0	0	1	0%

Key Accomplishments (FY 2003)/Planned Milestones (FY 2004/FY 2005)

- The Office of Science completed deactivation activities for the Tritium Systems Test Assembly and transferred the facility to EM for demolition (FY 2003).
- Completed the deactivation activities with non-EM funding (FY 2003).
- Continue surveillance and maintenance activities at the Tritium Systems Test Assembly to ensure safe and environmentally compliant conditions until final demolition (September 2004/September 2005).

Total, 2035 Accelerated Completions……...	**4,289**	**4,920**	**8,224**

Explanation of Funding Changes

	FY 2005 vs. FY 2004 ($000)
HQ-GJ-0031 / Soil and Water Remediation – Moab	
▪ Increase in funding will complete characterization of millsite; perform hydrologic and geotechnical investigations and detailed environmental studies on disposal cell site and initiate characterization, design and remediation of vicinity properties……	3,333
VL-LANL-0040-N / Nuclear Facility Decontamination and Decommissioning - Los Alamos National Laboratory (Non-Defense)	
▪ No significant change…….	-29
Total Funding Change, 2035 Accelerated Completions…….	**3,304**